

cardium, the opening should be closed the mammary artery ligated and the pleural wound sutured.

As regards technique of ligation of the internal mammary the following may be said. The vessel is frequently wounded behind the costal cartilage and to bring it into view, a corresponding piece of the cartilage must be excised, and the artery ligated in the adjacent intercostal space. If the wound of the vessel has occurred in one of the intercostal spaces an incision should be made down to the subpleural tissue, then in case the vessel does not appear, two flaps should be formed from the cartilage and soft parts, immediately above and below the wound, and when these flaps are turned back the artery will be visible either on the under surface of the cartilage or in the subpleural tissue, and after ligature of the vessel the cartilages are returned to their normal position.—*Archiv. f. Klinische Chirurgie*, Bd. 37, Hft. II.

F. C. HUSSON (New York).

HEAD AND NECK.

I. Experimental Contributions to Cerebral Surgery. By DR. IVAN K. SPIJARNYI (Moscow, Russia). The author has carried out 56 experiments on dogs and rabbits, in order (1) to determine the amount of vital and functional danger from brain-wounds, and (2) to study the process of healing of such wounds. The conclusions drawn by him from his researches may be condensed as follows: 1. Excision of wedges from the brain, varying in size from a pea to a walnut, is not associated with any immediate danger to the animal's life. Neither does it by itself give rise to any pronounced functional changes. The lesion, however, is frequently followed by consecutive haemorrhage and epileptoid fits. The former complication may be prevented by carefully controlling bleeding during the operation. 2. Similarly, introduction of foreign bodies into the brain substance does not necessarily place the patient in vital danger, and does not bring about any immediate marked functional disturbances, but it is followed by secondary epileptoid symptoms. 3. Both incised and punctured wounds of the cerebral cortex and white matter are almost harmless in

regard to life and cerebral functions. 4. Strict antiseptic precautions prevent any development of traumatic meningitis. 5. Healing of cut wounds of the brain takes place through the formation of a connective tissue scar. 6. The latter is formed both by leucocytes migrating from blood-vessels, and especially by proliferating connective tissue elements of the meninges (mainly of the pia). 7. In cases of cut wounds, degenerative changes of nerve elements in the white substance and deeper cortical layers are pronounced in a by far more considerable degree than in superficial strata of the cortex. 8. In cases of incised wounds in rabbits, cariokinetic phenomena are observed both in nerve-cells and in elements of neuroglia and connective tissue. In dog, they are limited to connective tissue elements alone. 9. A strict antiseptic management of cerebral wounds gives relatively favorable results in man, too.—*Vratch*, No. 2, 1889.

II. Trephining for Traumatic Lesions of the Skull.—By DR. HERMANN TH. ZEIDLER (St. Peterburg, Russia). During the last $2\frac{1}{2}$ years there were admitted to the Obukhovsky Hospital 38 cases of traumatic lesions of the skull, of which in 23 the cranial vault was injured (5 cases referred to compound fissures, 2 to subcutaneous fractures, and 16 to compound fractures). In 7 cases, primary trephining was performed, with 3 recoveries and 4 deaths; and in 3 secondary, with 2 recoveries and 1 death. The remaining 13 cases were treated without trephining; 9 of them recovered, 4 died.

In 7 out of the 9 fatal cases, death was caused by a simultaneous severe lesion of the brain, the patients dying in from a few hours to 2 days; in an eighth case by meningitis, and in the ninth by unrecognised haemorrhage from the middle meningeal artery. Of 15 cases of lesions of the cranial base, 5 recovered, and 10 died. Analysing his cases, Dr. Seidler arrives at the following conclusions: 1. Cerebral symptoms in cases of traumatic injuries to the skull constitute an indication for a primary trephining only in the presence of an unmistakable train of symptoms pointing to an intracranial haemorrhage from the middle meningeal artery. 2. In the absence of the haemorrhage, no trephining is indicated in cases of subcutaneous fractures of the skull. 3.